

CLAIMS

1. A method for the oxygen gas delignification of cellulose pulp in a gas/fluid suspension in which the oxygen gas delignification takes place in a reactor system with one or several oxygen gas reactors, in which delignification chemicals such as oxygen gas at such a quantity that oxygen gas remains present during the complete reaction process in the reactors together with alkali at an amount that ensures that the pH remains over 9 are added at least before a first oxygen gas reactor (101) characterised in that the temperature of the cellulose pulp is measured at the start of the oxygen gas delignification at at least two different locations with the aim of determining the initial consumption of delignification chemicals that have reacted in the fluid phase, which determined initial consumption of chemicals is used to control or adjust the charged amount to the oxygen gas delignification of at least one delignification chemical, such that the charged amount of chemicals can be reduced while at the same time guaranteeing the presence of chemicals during the complete process.
2. The method according to claim 1, characterised in that the positions of the measurements between two subsequent temperature measurements correspond to positions between which the pulp has had a retention time in the system between 10 seconds and 30 minutes, preferably 1-10 minutes.
3. The method according to either claim 1 and 2, characterised in that the first temperature measurement (T1) is made at a location after the addition of oxygen gas.
4. The method according to either claim 1 and 2, characterised in that the first temperature measurement (T1) is made at a location before the addition of oxygen gas.
5. The method according to any one of claims 1-4, characterised in that two temperature measurements are made and that the derivative be-

tween the first and the second temperature measurements is used to control the charged amount of at least one delignification chemical.

6. The method according to any one of claims 1-4, characterised in
5 that the temperature measurements are coupled to an oxygen gas trend, which oxygen gas trend is used to control the charged amount of at least one delignification chemical.
7. A system for the oxygen gas delignification of cellulose pulp in a gas/fluid
10 suspension in which the oxygen gas delignification takes place in a reactor system with one or several oxygen gas reactors, in which delignification chemicals such as oxygen gas at such a quantity that oxygen gas remains present during the complete reaction process in the reactors together with alkali at an amount that ensures that the pH remains over 9 are added at
15 least before a first oxygen gas reactor (101) characterised in that two sensors (113) for temperature measurement are arranged after each other in the direction of flow of the pulp with physical locations in the system that ensure a retention time of 1-10 minutes, the sensors (113) transfer the measured data via means for signal transmission to a suitable control unit
20 (111), which control unit (111) calculates the amount of delignification chemicals consumed, the control unit (111) subsequently regulates a signal-controlled valve (112) for the control of the amount of at least one delignification chemical added.
8. The system according to claim 7 characterised in that the first sensor (113), viewed from the direction of flow of the pulp through the system is placed at a location directly after the addition of oxygen gas.
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9. The system according to claim 7 characterised in that the first sensor (113), viewed from the direction of flow of the pulp through the system is placed at a location directly before the addition of oxygen gas.
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